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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/550,080	09/19/2005	Renaut Mosdale	034299-666	1436

7590  
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03/09/2007

EXAMINER

WANG, EUGENIA

ART UNIT

PAPER NUMBER

1745

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	03/09/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

<b>Office Action Summary</b>	<b>Application No.</b>		<b>Applicant(s)</b>	
	10/550,080		MOSDALE, RENAUT	
	<b>Examiner</b>		<b>Art Unit</b>	
	Eugenia Wang		1745	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-5 is/are pending in the application.
- 4a) Of the above claim(s) 4 and 5 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3 is/are rejected.
- 7) ☒ Claim(s) 1-3 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 9/19/05 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>2/9/07</u> . | 6) <input type="checkbox"/> Other: ____.  |

**DETAILED ACTION**

***Election/Restrictions***

1. Applicant's election without traverse of Group 1 (claims 1-3) in the reply filed on February 9, 2007 is acknowledged.

***Preliminary Response to Preliminary Amendment***

2. The preliminary amendment received February 9, 2007 in light of the election have been received and entered. Action on the merits of claims 1-3 follows.

***Priority***

3. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

***Information Disclosure Statement***

4. The information disclosure statement filed February 9, 2007 has been placed in the application file and the information referred to therein has been considered as to the merits.

***Drawings***

5. Figures 1 and 2 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the

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applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

6. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: insulating areas [34]. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Specification***

7. The abstract of the disclosure is objected to because it is more than 1 paragraph. Correction is required. See MPEP § 608.01(b).

8. The disclosure is objected to because of the following informalities:

- a. The verb "require" should be 'requires' for correct noun verb agreement (p2, line 25).
- b. The word "par" is a typographical error and should be 'part' (p3, line 14).
- c. There should be a space in "23of" between the "3" and the "o" (p4, line 15).

- d. The word "in" should be removed in the phrases "in polymer" or "in inert" for better flow of the sentence (p5, line 17).
- e. Modifying "electrically conducting material" with the appropriate article modifier 'the' in front is suggested (p5, lines 18).
- f. Adding a '(' between "cell" and "(" would properly use the parenthetical notation (p8, line 6).
- g. It is necessary to note a reference to figs. 4-6 before describing parts of the invention that pertain to it (specifically before line 28 on p8).
- h. The list of references in the specification should be removed.  
Appropriate correction is required.

#### ***Claim Objections***

- 9. Claims 1-3 are objected to because of the following informalities:
  - i. In claim 1 "warp fabric" should be 'warp fibers', thus meaning the "a" before it should be deleted for proper article modification of a plural noun (line 2).
  - j. The word 'an' should appear before both "insulating" and "electrically" for proper article modification (line 3).
  - k. In claim 1, the use of "in" should be replaced with 'of' (lines 3 and 4).
  - l. In claim 2 the word 'the' should appear before "insulating" (line 1).
  - m. In claim 2, the words "in" should be replaced with 'a' for proper article modification (before "polymer") and 'an' (before "inert glass") (line 2).
  - n. In claim 3, the word "the" should be placed between "in" and "electrically" for proper article modification (line 1).

Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

10. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

11. Claims 1-3 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 1, the warp material (line 2) is indefinite, since it is unclear as to whether the warp material is in the fabric or is the fabric itself. Additionally, claim 1 recites "alternately" insulating and conducting material (line 4). The wording of in the claim is indefinite, as it could be interpreted as being either insulating or conducting, or both.

However, using page 8 of the specification (lines 5-11), the suggested claims language follows: A planar fuel cell comprising: an electrode-membrane-electrode assembly, wherein the membrane includes a fabric, said fabric comprising warp fibers, which are continuous insulating fibers of an electrically insulating material, and weft fibers comprising of both fibers of an insulating material and fibers of an electrically conducting material in an alternating fashion, so as to form insulating areas and conducting areas, respectively.

Since claims 2 and 3 are dependent on claim 1 and fail to rectify the issue, they are rejected as well.

***Claim Interpretation***

12. Due to the informality issues and the indefiniteness of claim 1, the following interpretation has been applied for the examination of the instant application. The warp fibers of the fabric are the insulating material. The weft fibers are both insulating and conductive materials arranged in an alternating pattern within the insulating material.

***Allowable Subject Matter***

13. Claims 1-3 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action.

The following is a statement of reasons for the indication of allowable subject matter:

Claim 1 teaches an electrode-membrane-electrode assembly, wherein the membrane includes a fabric, where the fabric comprises of warp fibers, which are continuous insulating fibers of an electrically insulating material. The fabric also has weft fibers comprising of both fibers of an insulating material and fibers of an electrically conducting material in an alternating fashion, so as to form insulating areas and conducting areas, respectively.

None of the prior art pieces of record teach, suggest, or render obvious the use of a single fabric with conductive and insulating fibers dispersed within in an alternating pattern. The prior art's layer that connects the electrodes have been drawn to a porous sheet or other solids. Since none of the prior art of record alone or in combination appear to teach, suggest, or render obvious the invention of claim 1, the invention of

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claim 1 is considered patentable over the prior art of record. Since claims 2 and 3 are dependent on claim 1, they would be allowable for the same reasons.

**Conclusion**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eugenia Wang whose telephone number is 571-272-4942. The examiner can normally be reached on 8 - 4:30 Mon. - Fri., EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Ryan can be reached on 571-272-1292. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

EW

**GREGG CANTELMO  
PRIMARY EXAMINER**

  
05 MARCH 2009